

FIG. 1

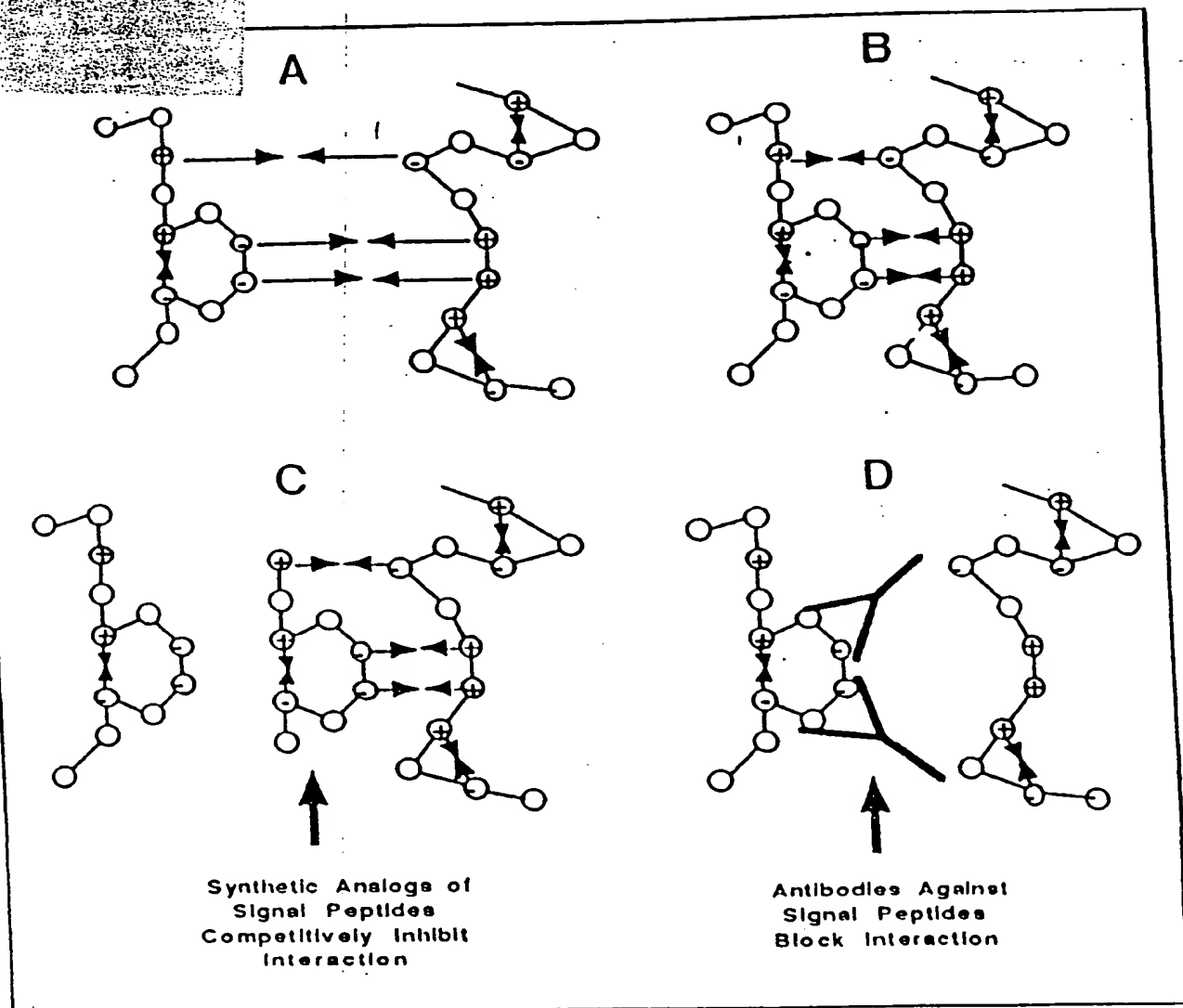
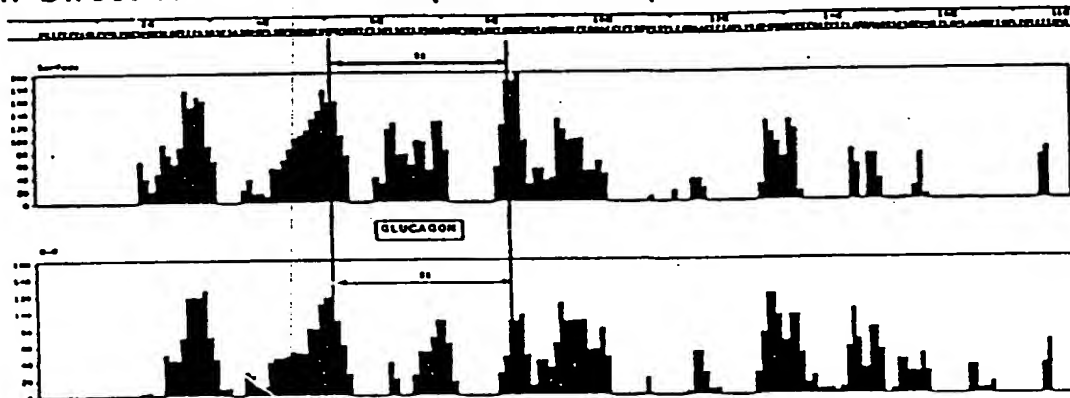


FIG. 2

# Glucagon Signal Sequences And Therapeutic Use In Direct And Indirect Peptide Interception Therapy



## Direct And Indirect Peptide Interception Therapy in Diabetes

- Decrease Effect of Glucagon
- Increase Relative Effect of Insulin

1. Antibodies Against Glucagon Vaccine  
(Synthetic Signal Oligopeptide)  
Decrease Action of Glucagon

2. Synthetic Analogs to Glucagon  
Signal Oligopeptides Competitively  
Inhibit Action of Glucagon

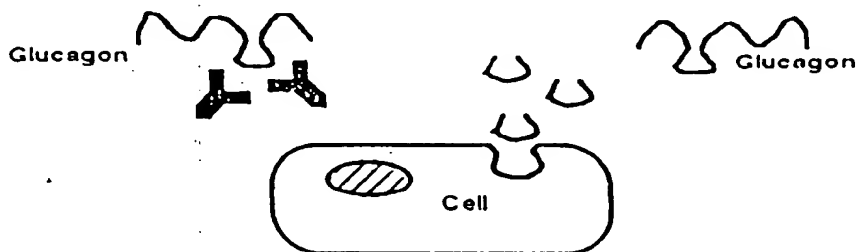


FIG. 3

## Direct Peptide Interception Therapy (Direct PIT)

Methods For Identification, Design, Development and Therapeutic Use of Synthetic  
Analogues to Signal Oligopeptides in Peptide Interception Therapy  
as Competitive Inhibitors Decreasing or Blocking Selected Protein Action

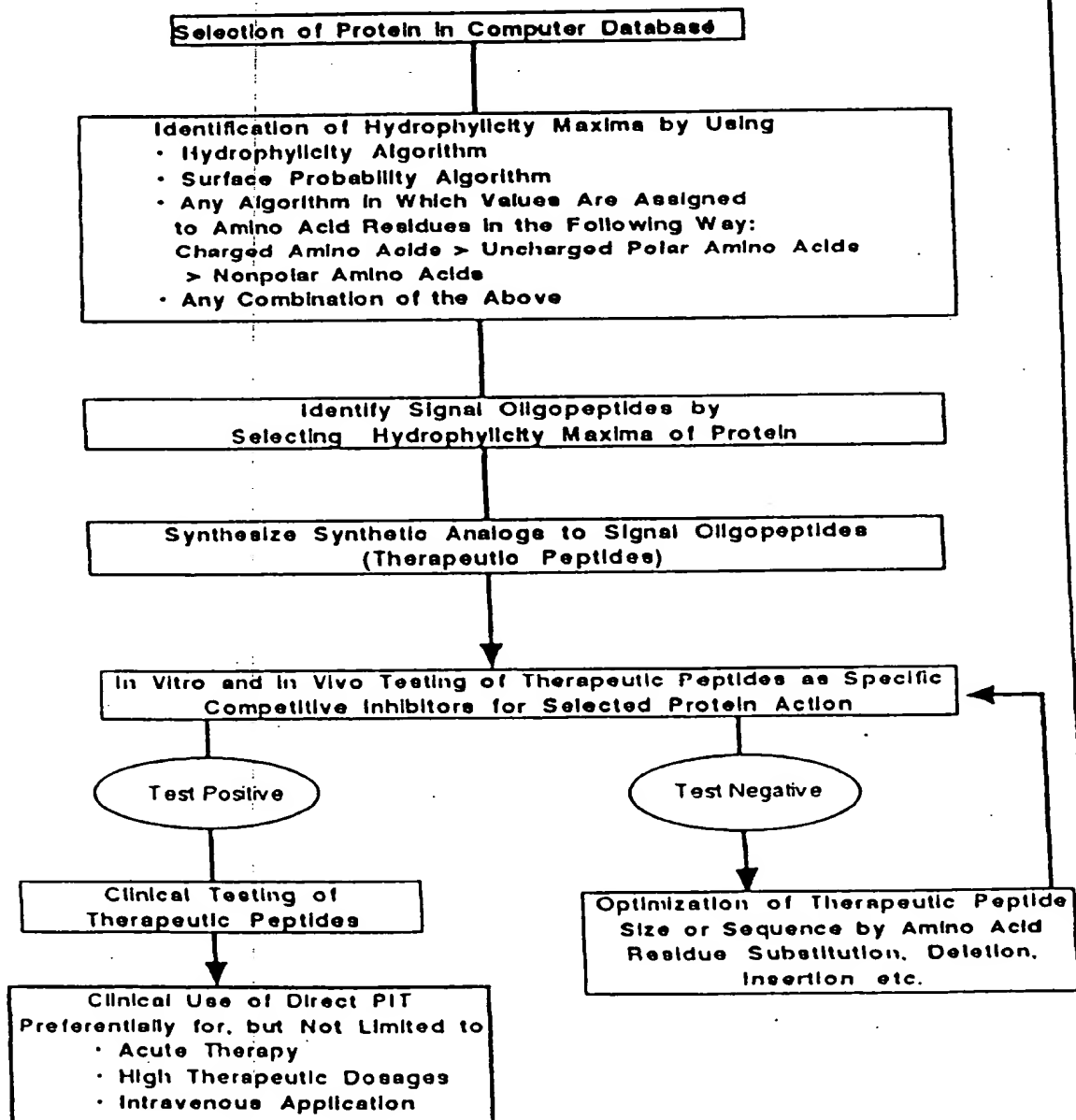
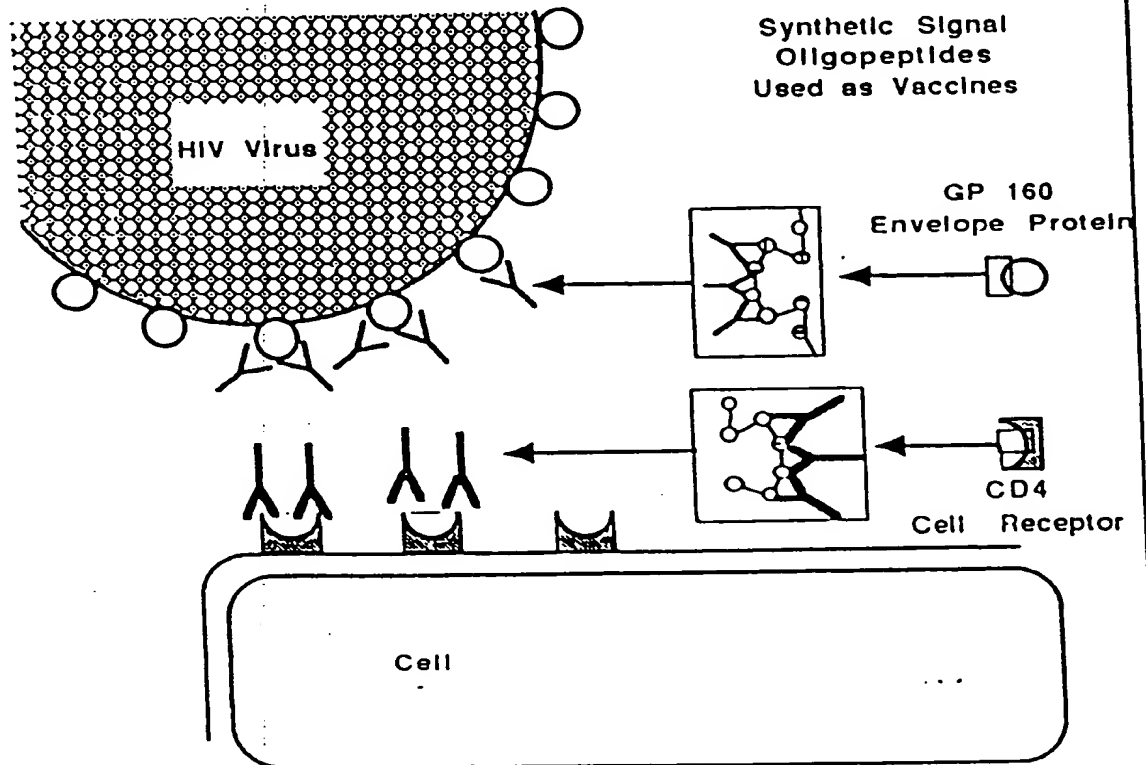


FIG. 4

Peptide Interception Therapy  
in the Prevention And Treatment  
of HIV Infections



098495-064304

Fig 5

## Indirect Peptide Interception Therapy (Indirect PIT)

Methods for Identification, Design, Development and Therapeutic Use of Synthetic Analogs to Signal Oligopeptides in Peptide Interception Therapy as Vaccines to Stimulate a Specific Immune Response Which Decreases or Blocks Selected Protein Action

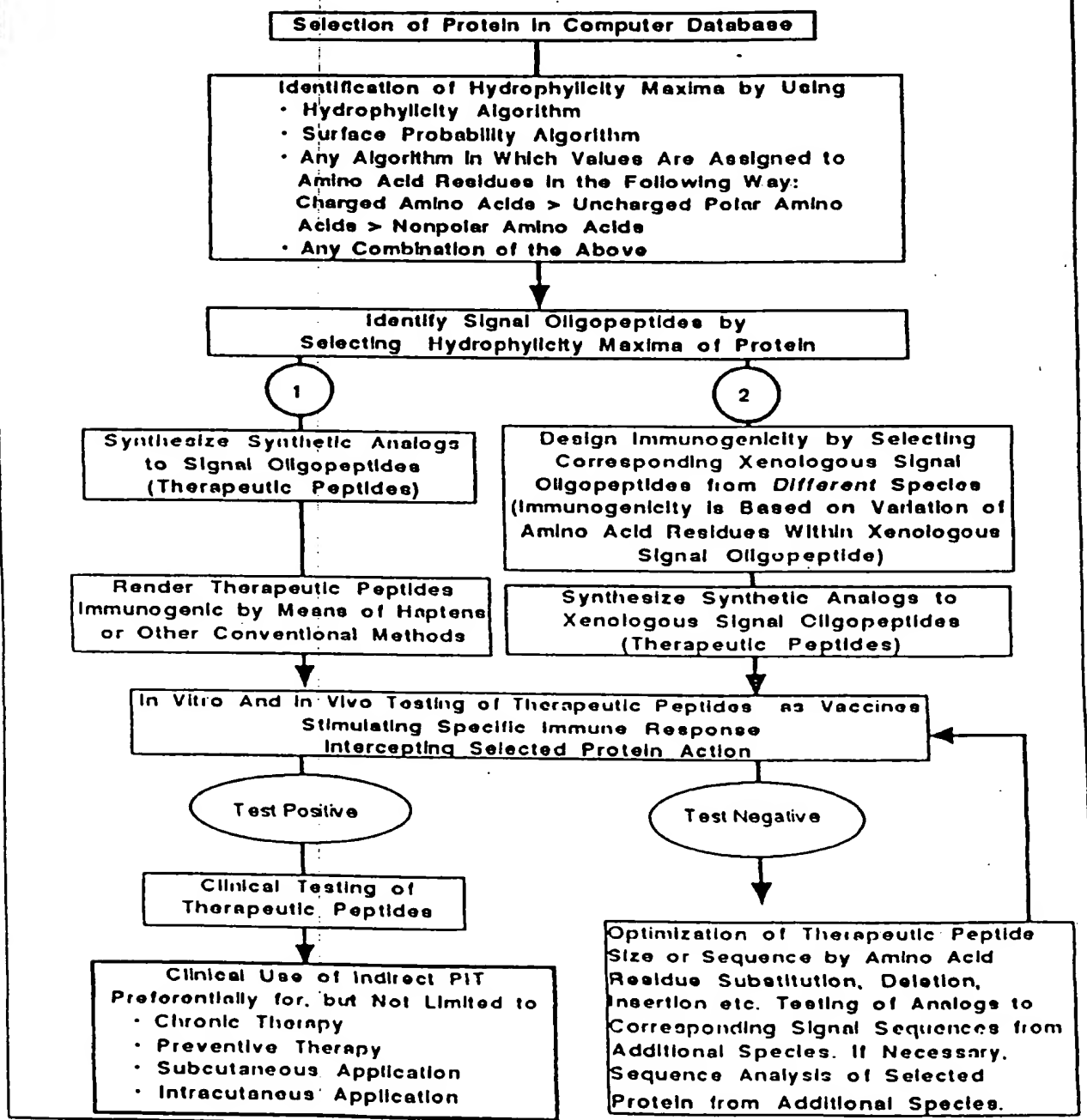


FIG. 6

## Peptide Regulation Therapy (PRT)

Methods For Identification, Design, Development and Therapeutic Use of Synthetic Analogs to Signal Oligopeptides in Peptide Regulation Therapy as Negative Feed-Back Regulators for the Synthesis Rate of Selected Proteins

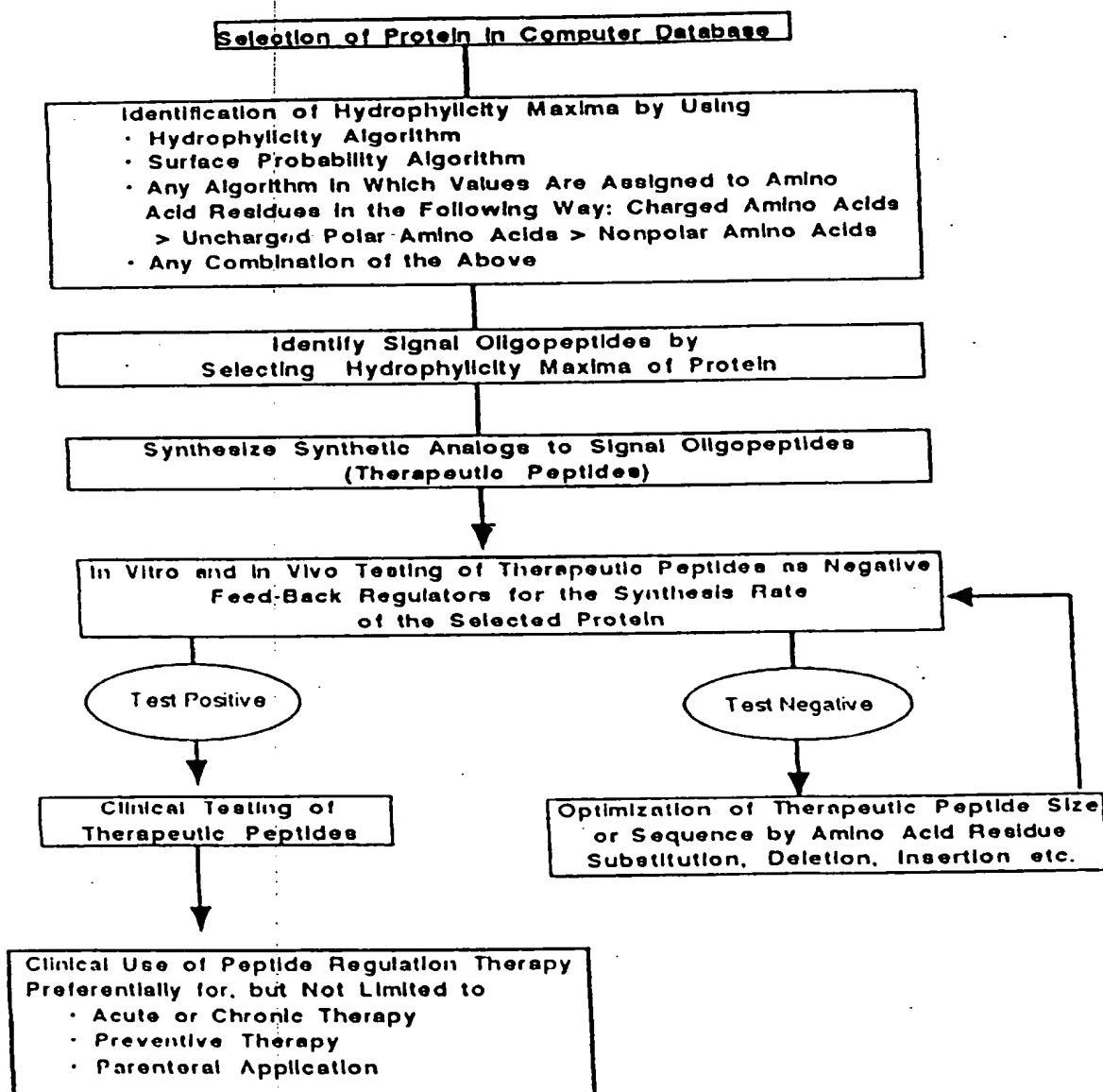
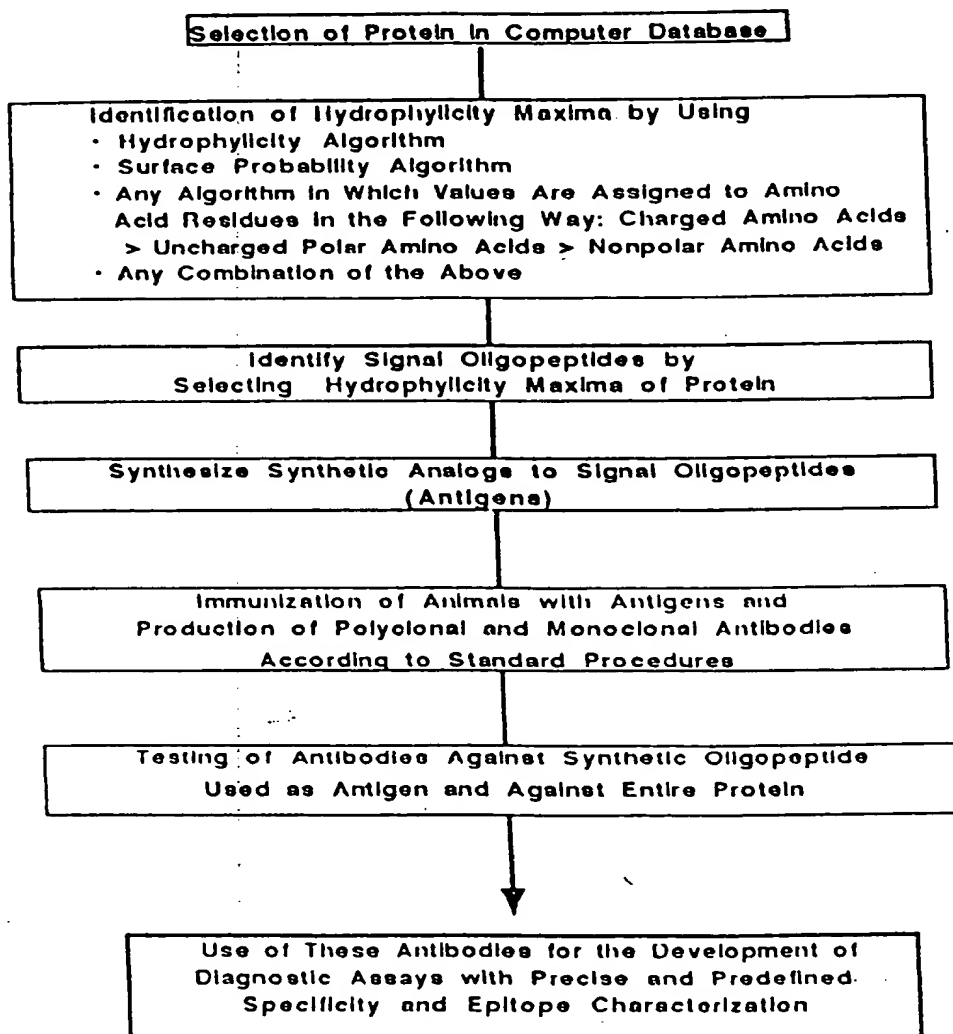


FIG. 7

## Signal Oligopeptides as Antigens for the Development of Highly Specific and Precisely Characterized In Vitro Diagnostic Assays

Methods For Identification, Design, Development and Use of Synthetic Analogs to Signal Oligopeptides as Antigens for the Production of Specific Antibodies with Precise Predefined Binding Characteristics



00001075-051501

[illegible]

**Exemplified for the the Development of Glucagon Vaccines  
for Indirect Peptide Interception Therapy of Diabetes Mellitus**

[illegible][illegible]

**1. Moderate Therapeutic Immune Response**  
**Desired:** Design of Therapeutic Peptides Analogous to Signal Sequences From Species Genetically Close to Humans (e.g. Mammals)  
 -> Amino Acid Residue Variation Within Therapeutic Peptide (Vaccine) Must Be Sufficient to Cause Immune Response  
 -> Therapeutic Use of Immune Response

**2. Strong Therapeutic Immune Response**  
Desired: Design of Therapeutic Peptides Analogous to Signal Sequences From Species Genetically More Distant to Humans (e.g. Fish, Yeast)  
 -> More Amino Acid Residue Variation Within Signal Sequence  
 -> Greater Antigenicity of Therap. Peptide  
 -> Higher Therapeutic Efficiency